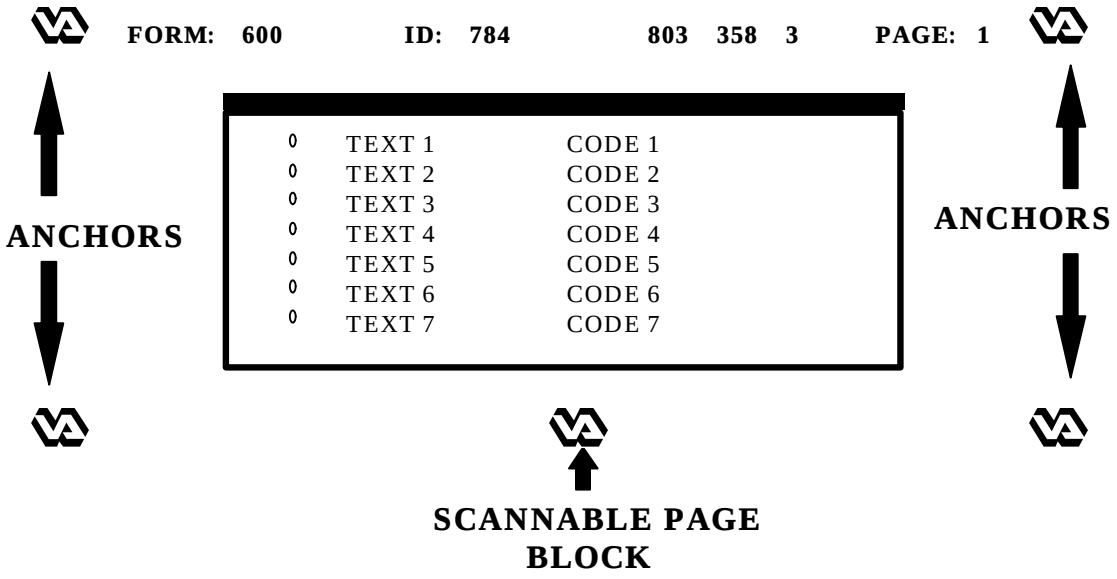
IV. Appendix - Scanner Calibration

Paper Keyboard is the proprietary software that was chosen to interface the AICS workstation with a scanner. Many different types of scanners may be used, and as a result of the differences between them, it may be necessary to calibrate your scanner with Paper Keyboard. Calibration should only be necessary under the following circumstances.

- Initial scanner hook-up on a workstation.
- Scanner is replaced at a workstation.
- Sheet feed mechanism is added or removed from the scanner.
- Paper Keyboard continually cannot recognize anchors on your form, forcing you to manually locate them.

In order to calibrate Paper Keyboard with your scanner it is necessary to understand the components on a form that make it scannable. They are:

- Anchor Marks: used to align the form,
- Scannable Page Block: used to determine if the page is scannable,
- Form, ID and Page Numbers: used to recognize the form being read.



During scanning, a FORM SPECIFICATION file is loaded that tells Paper Keyboard where to look for the anchors and scannable page block on a form. Paper Keyboard will attempt to locate these items in order to align the form before recognizing the data on the form. Sometimes, due to variations in scanners and/or shrinkage of forms, Paper Keyboard will not be able to locate these items. Calibrating Paper Keyboard with your scanner upon initial setup should prevent this from occurring. To calibrate the scanner, use the following steps.

1. Print a form to calibrate.
   - Use a form that has actual printed patient data with:
     - new VA logos for anchors;
     - areas to be scanned near the top and bottom of one page;
     - a FORM or ID number located on the top of the form.
   - You do NOT need to calibrate for each different form you have. You are simply selecting a form to use as a guide.

2. Start up the AICS software.

3. Highlight the key located in the upper left-hand corner of the AICS window. This will result in a sign-on to VISTA.

4. From the AICS workstation screen, go to File/Get Form Spec option, retrieve the form spec (type in the form spec number -#) for the form you printed in Step 1.

5. Exit from the AICS workstation software.

6. Start Paper Keyboard from the start menu (WIN95) or program manager (WIN 3.11).

7. Under File/Open Form Spec, open file C:\vista\aics\formspec\EF<#>.fs

8. Under Edit/Preferences, turn on Inspect Each Field, but don't save this setting.

9. Under View, make sure that Show Bounds is checked.

10. From within Paper Keyboard, scan in a form by clicking the scanner icon; then click the R icon to recognize.

11. After recognizing the Form ID and the page, you should see the red outline of the scannable areas. Drag the Field Value box out of the way, and check the top and bottom of the form. Cancel Field value box, and then click DISCARD to warning.

For example, if the red boxes don't exactly match the fields, under Edit/Scanner Settings, change the value in the calibrated scale. If the red boxes appear lower than the actual location, enter a negative number in the vertical calibrated scale. Try increments of 2 or 3.

12. Save the settings.

13. Repeat these steps until you are satisfied with the alignment.

ADJUSTING THE SCANNER BRIGHTNESS

If during the scanning process, you note that bubbles are being missed, or that stray marks are being interpreted as bubbled marks on a form, it may be necessary to adjust the scanner brightness. To do so, use the following steps.

1. Start the AICS software and log on to the the V*IST*A system.

2. Click the PK button on the bottom bar and maximize the PK window.

3. Under FILE, Open Form Spec for C:\vista\aics\formspec\AICSMSTR.FS.

   NOTE: You must use the AICSMSTR.FS file in this directory, not the one it defaults to.

   The AICS master form spec removes the very small dots that make up bubbles and hand print fields.

4. Under Edit/Preferences check Inspect Each Field, click okay but do not save. This will cause the Field Value box to come up and hold the image on the screen for inspection.

5. From within Paper Keyboard, scan in a form by clicking the scanner icon; then click the R icon to recognize.

6. Click and drag the Field Value box out of the way. Look over the form by moving it around. If you see pieces of bubbles left after the first recognition (the very small dots appear to have run together), set the brightness lighter (move to the right).

   NOTE: For Bell and Howell, the range is -4 to 4. Only move an increment of "1" at a time, as it has a more dramatic change than a move of "1" on the HP.

7. If you DO NOT see pieces of bubble but are having trouble recognizing valid marks, set the brightness darker (to the left).

8. Click Cancel in the Field Value Box, then click DISCARD to the Warning.

9. Usually, you want the darkest scan you can achieve and still remove all of the small dots. This may take some experimentation.